# COASTAL LOGGING CAMPS — AN ECONOMIC PROFILE

Prepared for:

**Economic Development Branch**
**BC Ministry of Sustainable Resource Management**

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# BUILDING BLOCKS FOR ECONOMIC DEVELOPMENT & ANALYSIS

## PREFACE

### PURPOSE

Building Blocks have been conceived and developed by the Economic Development Branch of the Ministry of Sustainable Resource Management, under the guidance of Nancy South, Manager Economic Analysis, as an analytical tool that supports British Columbia coastal and land and resource use planning and decision-making and economic development initiatives. The Blocks contain concise business and sector information for a broad range of resource-based business types in BC. At this point, there are more than 30 Blocks either complete or in draft form. Several more Blocks have been identified as high priority by planning tables and other client groups. Additional Building Blocks will be developed over time, and some Blocks may be updated. For the most current Building Blocks, please see the Ministry of Sustainable Resource Management website, at: http://srmwww.gov.bc.ca/rmd/ecdev/


### ACKNOWLEDGEMENTS

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### BENEFITS

Building Blocks are expected to provide the following general benefits:

- Increase efficiency and more informed decision-making by providing readily accessible, credible information to planning and economic development processes;
- Improve the consistency of economic information across planning areas;
- Support economic analysis and decision-making that occurs outside formal coastal and land use planning processes; and
- Provide linkages between economic analysis and other social and environmental analytical tools (through identifying resource requirements to support economic activities and general compatibilities with other sectors and values).

### LIMITATIONS

Every effort has been made to ensure that the information contained in Building Blocks is accurate and consistent. Approved, credible data sources are the foundation for Building Blocks. All Blocks were reviewed by sponsoring agencies and other experts. However, users are cautioned that information is used at their own risk, and that the authors and sponsors are not liable for any damages. Any conclusions or interpretations by the authors are not intended to represent government policy. Also, note that Building Blocks do not provide site specific information nor do they consider requirements for sustainability (social, community, environmental).


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### RECOMMENDED REFERENCE/CITATION

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# 1.0 OVERVIEW OF ECONOMIC ACTIVITY

## 1.1 Focus

This Building Block profiles logging camps on coastal BC[1]. A logging camp is a support service for timber harvesting that provides accommodation and food for forest workers in remote locations where daily commuting to forest work sites is impractical. Camps are almost always integrated with log handling, fuel storage and equipment repair services. The trend in coastal British Columbia is towards greater use of mobile, barge-based camps housing fewer forest workers. Logging contractors or licencees organize, finance and manage their own logging camps, rather than rely on purchased accommodation and food services.

## 1.2 Principal Services

- Accommodation
- Food
- Laundry and clothes drying
- Leisure, such as satellite television and ping pong
- Work site office
- First aid facility

## 1.3 Related Services

- Log handling, i.e. dry land sort and/or log booms
- Fuel storage
- Equipment repair
- Transport terminal

## 1.4 Logging Camp Features

Logging camps provide short stay accommodation for forest workers who commute long distances between their work sites and home communities. The shifts range from 5 days on and 2 days off shifts in accessible camps to shifts of 10 on and 4 off and 20 on and 8 off in remote camps, with camp stay duration lengthening with more remote locales. Some camps also use shifts for continuous operations, such as 10 on and 5 off.

Up until the late 1980s, many logging camps were small communities, having permanent residents, including families. They would have a school, community hall and in a few cases, family oriented recreation facilities. Examples of these logging "settlements" are Sewell Inlet, Holberg, Phillips Arm, Wakeman Sound, and Thompson Sound, and Toby Inlet. Logging communities had been on the decline since the mid 1950s when the BC Government started its rapid expansion of the provincial highway system. It was in the 1980s, that timber harvesting companies re-organized the remaining logging communities as short stay commuting work force camps. The changes arose for social and financial reasons. On the social side, families no longer wanted to stay in remote settlements, preferring larger communities with work opportunities for spouses and a wide array of services. The financial


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push came from the BC forest industry's drive to lower its costs by reducing overhead and government requirements for smaller, dispersed harvesting blocks, which favour use of mobile, barge camps.

Land-based camps have a long history in BC logging and until the late 1980s would accommodate 100-200 forest workers. With a trend towards minimizing use of camps to help reduce harvesting cost, land-based camps have become smaller and fewer in number.

A dry land sort and booming ground will be located nearby a coastal BC camp. There will be a repair shop structure, possibly a fold-away metal building with a gravel floor, and a small fuel farm for the harvesting equipment, diesel generators and possibly helicopter service. A solid waste disposal site will be located a short distance from the camp.

Main features of current camp living conditions are as follows:

- Camp accommodation is in single rooms
- Common cookhouse, and the quality of meals is an important feature of camp life (The following quotation is from an article[2] on the Eden Lake logging operation, "The camp cook is the real head honcho, and Craig [Eden Lake logging operation superintendent] pays John Able from Cal-Van Canus Catering a telling compliment: "He's been here about 10 years and I've never got tired of his stuff.""
- Basic leisure activities, such as satellite television, and sometimes ping pong, pool and a small workout facility
- Alcohol and drug abuse and gambling are no longer prominent in camp life
- Diesel power generation
- Propane heating for land camps and recovered generator heat for barge camps

Modular work force housing ("Atcos"), is the favoured form of structure for land-based camps. They are available in about 30 different standard outlines, including 11' x 54' five room sleeping units and 11' x 56' kitchen / dining room / drying room units. They sit on triple 12" I beam skid frames, which can be dragged around, and are usually outfitted with propane tanks for heating. The units are constructed in the Lower Mainland, barged and skidded off a beach or trucked to the camp site. Langley-based Atco also has a rental fleet, which has become more popular as a result of the smaller harvesting blocks.

The new barge camps are totally self-contained, two storey stick built structures on large (approximately 40' x 150') steel hull barges, where fuel storage, diesel generators, sewage disposal and water storage is in the barge's belly. They are towed from site to site.

There are two main categories of camps: land-based camp and floating or barge-based camp. An example of a land-based camp is Onion Lake Logging's Kendrick Camp on Nootka Island. Approximately 30 years old, it currently has a capacity for accommodating 50 persons and 40 persons stay at the current peak. Its size peaked at 200 persons in the early 1980s when there were married quarters and a stick built school. It now has modular industrial housing and a couple of stick built structures. There is satellite television and camp staff is comprised of a IWA unionized cook and bullcook. Crews work a 10 on and 4 off shift. They fly in via Air Nootka from Gold River or are crew boated in from Tahsis, Gold River and Solo River. Most crew members are Campbell River area residents. Food is trucked from Campbell River to


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Gold River and barged from there via Nootka Sound Service. Fuel is barged in from Vancouver by North Arm Transportation on its regularly scheduled west coast of Vancouver Island service. Equipment is barged in from Tahsis by Westview Towing.

Another example of a land-based camp is Western Forest Products' Sewell Inlet camp on Moresby Island. Commissioned in the late 1960s, it currently has a capacity for accommodating 100 persons and about 40 persons stay at the current peak. Its size peaked at 300 persons in the late 1980s when there were married quarters, school, community hall, pub, and bowling alley. The community hall and pub continue to operate. It now has modular industrial housing and a couple of permanent houses, used by the woodlands manager and the camp watchman. There is satelite television and camp staff is comprised of an IWA unionized cook, bullcook and watchman. Crews work a 20 on and 8 off shift. They fly in via South Moresby Air from Queen Charlotte City or are crew boated in from Sandspit. Most crew members are Greater Vancouver residents and use regularly scheduled Air Canada flights. The employer pays 60% of the return flight fare between Vancouver and Sandspit if a crew member works a full shift. There is a weekly truck freight run by Canadian Freightways, which is picked up by a company crew boat for transport to Sewell Inlet. Fuel is barged in from Vancouver by North Arm Transportation on its regularly scheduled north coast service.

An example of an accessible land-based camp is Lineham Logging's camp at the north end of Harrison Lake. Commissioned in the late 1970s, it is owned by Canfor but operated by Lineham Logging, a contract logger for Canfor and Interfor. The camp currently has a capacity for accommodating 55 persons and about 30-35 persons stay here during the March to October logging season. It now has modular industrial housing and a few older, permanent houses. There is satellite television and camp staff is comprised of an IWA unionized cook and bullcook. Crews work a 10 on and 4 off shift. They drive in from their Fraser Valley residences. There is a road up the west side of Harrison Lake that passes through the camp and up the Lillooet River valley to Pemberton. The camp also has a gravel air strip. The camp cook resides in Victoria and makes food purchases there. A local Chilliwack expeditor transports equipment parts and other smaller items to this camp, which is approximately a two and one-half hour drive from Chilliwack. Fuel comes in via tanker truck from Pemberton. There is a nearby dryland sort and an adjacent booming ground.

An example of a barge-based camp is Alm-Wood Contracting Ltd.'s barge, which is currently moored at the Kemano community marina. It can accommodate a maximum of 50 persons and about 20-40 persons stay on the barge during the end of March to end of October logging season. The 45' x 165' barge camp was constructed in 1995 by Campbell River-based Discovery Diesel and Electric. Diesel fuel is stored in the steel hull, along with diesel generators, sewage system, fresh water storage, and heat system. Heat is recovered from generators and re-used for heating the living quarters. The camp is a two story, stick built, vinyl clad, aluminum roofed structure. The upper two storey structure houses single room living quarters, kitchen, dining area, laundry facilities and dry room. A log handling booming ground is adjacent to the barge and a maintenance shop is situated 10 km from Kemano. There is satellite television and camp staff is comprised of an IWA unionized cook and maintenance person. Crews work a 10 on and 4 off shift. They are transported to Kemano from Kitimat and return via company crew boat.


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## 1.5 Marketing

There are no logging camps in BC that operate along the lines of an independent hotel, which specializes in industrial workers. Logging contractors or licencees organize, finance and manage their own logging camps, rather than rely on contracted services. Sub-contractors, such as helicopter logging crews, fallers, truckers, and small logging operations that undertake Small Business Forest Enterprise Program (SBFEP) harvests rent room and board services for their forest workers from larger logging contractors and licencees on an as needed basis.

Neither the number of logging camps nor the number of forest workers using logging camps is known by a government agency. An indirect estimate can be made by assessing the percentage of forest workers in a timber harvesting unit that regularly use logging camps. This type of estimate was developed as part of the Central Coast LRMP process and is as follows: Kingcome TSA - 30%; Mainland PMN district TFLs - 30%; Mid-Coast TSA - 80%; and Mid-Coast district TFLs - 100%. Of the roughly 4,400 Person-Years (PYs) of direct forest harvesting / processing employment that is linked to the Central Coast harvest, it is estimated that 95% of the forest workers use camps and reside outside of the Central Coast LRMP area[3].

Tree planting companies will sometimes rent room and board services of logging camps but they primarily rely on their bush camps, which are regulated by local health authorities and WCB. Tenures for logging camp operators restrict their use to forestry related activities and do not permit servicing tourists, such as hunters and recreational fishers. Since logging camps are located in remote wilderness areas, there is some use by hunters and fishers on a casual, unorganized basis. There is no obvious shift to converting logging camps to tourist accommodation. One well known example is when Husby Forest Products was formed in the early 1980s through a takeover of two Japanese company owned logging camps on Graham Island. One of the camps became the Eden Lake logging operation and the other was transformed into Peregrine Lodge at Naden Harbour, a high end resort which caters to sport fisherpersons.

Regulation of logging camps is diffuse so some small-scale operations take advantage of this situation and establish temporary camps, possibly consisting of a recreational trailer or two or a couple of fishing boats. These temporary camps are unregulated and illegal.

## 1.6 Site Selection

In coastal BC, logging camps are most often located either on the foreshore or near a water off-loading site and adjacent to active but remote timber harvesting areas.

Land-based camp – The most desirable arrangement is to have the logging roads radiate outward from a camp site. The camp footprint is minimized to reduce the loss of industrial forest land and is flat, possibly adjacent to a water body where logs can be boomed. There must be a satisfactory fresh water supply and reasonable access to water-based transportation.

Water-based camp – Barges are anchored on a foreshore in sheltered waters. There must be a satisfactory fresh water on-shore supply.


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## 1.7 Associated Businesses Providing Direct Inputs

### Camp Service Suppliers

These operations mainly provide food, living accommodation supplies, some equipment, possibly linen, and cooking and dining area clean-up and light housekeeping services. Currently, there are two larger camp service suppliers that service coastal logging camps, Pacific Camp Services and Eurest Support Services, the latter is a catering company that also contracts with public institutions, whereas the former focuses on industrial camps. There are local cooks who are hired on contract or on an employee basis by camp owner/operators too.

### Modular Housing Builders

The Langley operation of Alberta-headquartered Atco is the biggest supplier in the province and will sell or rent a wide variety of modular work force structures.

### Barge Builders

The trend towards utilizing mobile barge-based camps created a demand for all inclusive camps on steel hulled barges. Campbell River located Discovery Diesel and Electric is the main builder of barge-based camps for BC coastal operations. Its primary business is supplying and assembling diesel-fueled power generator sets. The company built its first barge camp in 1995 and has constructed a total of 10. The last two were built in 2000 as the downturn in the coastal forest industry has since eliminated demand for these major capital outlays. This supplier, as are other capital suppliers for the coastal forest industry impacted by its constrained economics, looks to the potential of offshore oil and gas exploration for leveraging its expertise in servicing industrial camps.

### Food Service Companies

A few Lower Mainland-based companies supply the hotel, restaurant, and institution (HRI) trade, with foodstuffs, including packaged items, fresh produce, meat and seafood. Main players include Serca Foodservice Inc. and Pacific Produce.

### Air Transportation

A few small airlines are relied upon to transport forest workers, mechanical parts and food to crew marshalling sites on scheduled and chartered arrangements. An example is Gold River-based Air Nootka, which has a 3x per week scheduled service between Gold River and Kyuquot, and services an estimated 29 west coast of Vancouver Island logging camps. From the marshalling sites, forest workers will travel by crew boat or truck to the camps and work sites. Forest workers in the Queen Charlotte Islands also rely on regularly scheduled Air Canada flights between Sandspit and Vancouver International Airport.

### Boat Transportation

There are a few, locally-based boat services operating on the BC coast that service logging camps, along with tourist lodges, aquaculture operations and remote coastal settlements. An example is Gold River-based Nootka Sound Service, which has a 140 foot passenger/cargo vessel that makes regularly runs between Gold River and Zeballos and Gold River and Kyuquot. It does not transport heavy equipment but carries vehicles, equipment parts and cables, groceries, building materials and passengers. It has been in operation since 1960.


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### Barge Transportation

Foodstuffs are usually trucked to Campbell River or Port Hardy and then placed on barges transporting other items, such as road building equipment and fuel trucks, along the coast. Port Hardy-based Moore Marine is an example of a regional barge operator, servicing Rivers Inlet, Klemtu, Hartley Bay and Mid-Coast logging camps, along with a monthly service to Campbell River. Nootka Tug out of Gold River provides barge service along the west coast of Vancouver Island. North Arm Transportation, based in south Vancouver, has regular once per month barge deliveries for each of the North Coast, west coast of Vancouver Island and Mid-Coast areas. Rivtow operates a once per week barge service between Vancouver and Kitimat, but makes no stops on the coast.

## 2.0 RESOURCE REQUIREMENTS AND SENSITIVITIES

### 2.1 Provincial Crown Resources Required to Support Logging Camps

Land-based camp – Provincial Crown land is required for the accommodation and service buildings, dry land sort, solid waste disposal, parking and transportation access. Provincial foreshore access is needed for a booming operation. Amount of land and foreshore varies with terrain and services provided. A typical land-based camp will utilize approximately one hectare for the camp and a total of four hectares, which includes a dry land sort.

Barge camp – Provincial foreshore access is required, along with Provincial Crown land for related activities, such as solid waste disposal and a dry land sort.

### 2.2 Resource Capability

Land-based camp – Flat terrain with good drainage, an appropriate distance from water bodies, especially fish bearing streams. Reasonable foreshore conditions, including flat access off a nearby beach and relatively deep water. A government agency does not pre-select or zone appropriate sites. Timber harvesting companies identify a site and apply to the appropriate BC Government agency for needed regulatory approvals.

Barge camp – A sheltered cove that experiences minimal wave action during periods of high winds. Reasonable foreshore conditions, including flat access off a nearby beach and relatively deep water. A government agency does not pre-select or zone appropriate sites. Timber harvesting companies identify a site and apply to the appropriate BC Government agency for the needed regulatory approvals.


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## 2.3 Availability of Crown Land and Foreshore

There are no land and foreshore supply constraints on logging camps for several reasons.

Camps are sited in remote areas where there are almost no competing uses.

The physical footprint of land-based and barge camps are relatively small. Land-based camps occupy approximately one hectare with a further three hectares needed for a dry land sort and other related activities. A barge camp will need about one-quarter of a hectare.

New logging camps and log handling operations are temporary in nature because coastal BC logging practices have changed over the past decade, i.e. harvest areas are smaller, harvesting occurs in smaller drainages, and there is greater emphasis on managing the landscape, especially visual aesthetics.

## 2.4 Potential Complementary/Conflicting Relationships with other Resource Values

### Environmental Values

There is potential for logging camps to (a) disturb/harm wildlife through noise and human activity (commuting to the work site, hunting and fishing), and (b) modify wildlife habitat. Barge camps can alter the composition of sea life through disturbance of the seabed, random pollution from the barge and logging debris from the booming grounds. Most effects are either considered of low severity, or able to be mitigated through appropriate management.

### Use Conflicts

Logging camps are located in isolated areas and occupy small footprints so conflicts with other resource users are less likely. For some tourists, the quality of their wilderness experience may be lessened when they come upon a logging camp in a remote location. However the camps also offer first aid and rescue service outlets in remote areas for tourists and fisherpersons where access is difficult and transit times from larger centres are long. There is limited potential for conflicts with spawning grounds, thereby harming the interests of commercial fishers but camp proponents are advised to consult with Fisheries and Oceans Canada upon applying for a tenure from either Land and Water BC or BC Ministry of Forests. They are also advised to consult with Environment Canada about potential conflicts with aquaculture operations in advance.


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# 3.0 REGULATORY REGIME

## 3.1 Licences and Other Approvals Required

Four types of Crown Land tenure can be issued for logging camps and related activities:

- *Special Use Permit* (SUP) for land-based camps – BC Ministry of Forests
- *Lease* for water- or land-based camps – Land and Water British Columbia Inc.
- *License of Occupation* for water- or land-based camps – Land and Water British Columbia Inc.
- *Freehold* title can be acquired by purchasing Crown land for a land-based camp - Land and Water British Columbia Inc.

Logging camps require the following approvals in order to commence operations:

- Provincial Crown Land tenure issued by Ministry of Forests or Land and Water British Columbia Inc. A protocol agreement between Land and Water BC and Ministry of Forests is in place that allocates tenuring responsibility through its Special Use Permit system (under the *Forest Act*) for upland forestry uses to the latter.
- Sewage discharge permit under the *Waste Management Act* issued by BC Ministry of Water, Land and Air Protection for discharge of more than 5,000 gallons of sewage per day or septic field permit from BC Ministry of Health.
- Permit issued by BC Ministry of Water, Land and Air Protection for open burning of log sort wastes.
- Permit issued by BC Ministry of Water, Land and Air Protection for withdrawing fresh water from a surface water body or from a groundwater source.
- Conditional Exemption Regulation of the Waste Management Act allows camp operators to use a small incinerator for burning domestic wastes without obtaining a provincial permit.
- Permit issued by the *Waste Management Act* from BC Ministry of Water, Land and Air Protection to operate a solid waste landfill to dispose of incinerator ash and solid wood breakage form the dry land sort.
- Section 5.2 exemption under the *Navigable Waters Protection Act* issued by the Canadian Coast Guard for float camps and water-based log handling operations. Applicants must complete an application package.
- Obtain "letter of advice" from Fisheries and Oceans Canada that proposed works (especially barge camp sewage disposal) will not have harmful impacts on fish habitat. If proposed works are likely to be harmful to fish habitat need authorization from Fisheries and Oceans Canada under Section 35.2 of the *Fisheries Act*.
- Environmental Assessment Section, Environment Protection Branch of Environment Canada reviews tenure applications to assess impact of logging camps and log handling operations (excessive bark) on finfish and shellfish farms.

BC Ministry of Forests and Land and Water BC refer tenure applications to other agencies for comments. A clause in Land and Water BC tenure documents states that tenure holders must obey all the laws of the land, which imposes the responsibility on tenure applicants to secure the aforementioned regulatory approvals.


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BC Ministry of Health is responsible for the Industrial Camps Health Regulation (BC Reg 427/83) under the *Health Act*. From time to time Environmental Health Officers inspect logging camps to assess compliance, which focuses on sanitary standards of cooking facilities and bunkhouses. An operating permit is required under the regulation. WCB and Fire Commissioner's Office officers will also inspect logging camps from time to time for safety, emergency, fire issues[4].

Regional Districts and First Nations are provided with the opportunity to comment on a logging camp proposal but do not have regulatory authority on Crown land.

## 3.2 Process of Securing Approvals

Land and Water BC process – Logging camp applicants must complete an application that includes an estimate of the project's economic impact, site plan, side view of improvements, management plan and information on high and low water marks. A legal survey is required for a lease application. Most proponents of logging camps and log handling operations seek a License of Occupation (10 year maximum term) because they do not require the longer term (30 years) that is available with a lease.

BC Ministry of Forests – Special Use Permits (SUPs) are issued by Forest District Managers under the *Forest Practices Act*, and are one of 15 forest tenures issued by the BC Ministry of Forests. There is a generic one page application form for a SUP Special Use Permit but a District Office will require supporting documents such as a detailed layout, waste disposal plan and maps. There is no province-wide practice on grouping forestry related support activities under one rather than several SUPs but current practice appears to support issuing one SUP for a forestry base consisting of logging camp, log sort yard, fuel farm, waste disposal site, etc.

## 3.3 Approximate Time and Cost to Gain Approvals

Land and Water BC has a time limit policy of 140 days for processing from the date that LWBC accepts the application package as being appropriately completed.

A lease is available for a term of up to 30 years and Land and Water BC assesses 8% of the lease value as the annual payment. Lease Value is based upon an appraisal of the land and improvements undertaken by BC Assessment Authority. In the event that BC Assessment Authority has not appraised the foreshore value for log handling operations below the high water mark, an appraisal of a nearby dry land sort may be used.

A license of occupation is available for a term of up to 10 years and Land and Water BC assesses 7.5% of the license value as the annual payment. Lease Value is based upon an appraisal of the land and improvements undertaken by BC Assessment Authority.

Five years is a standard term for a Special Use Permit. It is replaceable. There is no set processing time but approximately six months is usually needed. BC Ministry of Forests assesses 7.5% of the SUP value as the annual payment. Lease Value is based upon an appraisal of the land and improvements undertaken by BC Assessment Authority. BC Ministry of Forests requires a deposit from a SUP holder to help offset environmental risk.


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The rule of thumb is $10,000 if there is on-site fuel. Major licensees are not required to provide a deposit because they have one in place for their forest tenures. SUP holders have a legal obligation to return their site to its original condition upon surrender of the SUP. The cost to remove site structures and undertake appropriate clean-ups varies with terrain and camp size and log handling operation size. It is a liability that appears on SUP holder financial statements.

There are no fees charged for a *Navigable Waters Act* and *Fisheries Act* approval but several months are required for application processing.

# 4.0 INVESTMENT AND COST

## 4.1 Start-up and Ongoing Costs for Logging Camps

### Total Cost per $m^3$

The Revenue Branch of BC Ministry of Forests annually surveys major licencees to obtain harvesting costs, including logging camp costs, and reports the averaged results in the Coastal Appraisal Manual. An average cost per $m^3$ for total camp operations over the 2001-1998 period is $11.27 for camps that are accessible by roads and $12.34 for camps that are accessible by only air and boat. The 1998-2000 cost for operation of cookhouses and bunkhouses[5] alone was $2.78 per $m^3$. The per $m^3$ cost for crew air fare and cargo was $1.23 and $0.77, respectively, for the same period. The following table presents the reported results[6].

**Coastal Logging Camp Costs ($/$m^3$)**

| Category | |
|---|---|
| | **2001**[7] |
| | **2000** |
| | **1999** |
| | **1998** |
| | **Average** |
| | Accessible cutting authority |
| Total[8] | |
| | $9.57 |
| | $12.13 |
| | $11.09 |
| | $12.31 |
| | $11.27[9] |


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| | |
|---|---|
| Cookhouse & bunkhouse | |
| | - |
| | 2.75 |
| | 2.27 |
| | 3.32 |
| | $2.78 |
| | Isolated cutting authority |
| Total | |
| | $15.55 |
| | $10.00 |
| | $12.19 |
| | $11.62 |
| | $12.34 |
| Cookhouse & bunkhouse | |
| | - |
| | 2.75 |
| | 2.27 |
| | 3.32 |
| | $2.78 |
| Crew airfare | |
| | - |
| | 0.61 |
| | 1.14 |
| | 1.95 |
| | $1.23 |
| Freight | |
| | - |
| | 0.62 |
| | 0.80 |
| | 0.89 |
| | $0.77 |

Source: Coastal Appraisal Manual

## 4.2 Capital Cost

Land-based camp – There will be few if any new land-based camps on coastal BC because of changes in harvesting practices over the past decade and cost containment pressures on logging companies. Replacement or addition of modular work force housing to existing land-based camps will occur, however. A new modular sleeping quarters unit to accommodate 10 persons is approximately $50,000. A cookhouse / dining area / laundry unit is approximately $100,000. In addition there are transportation charges that vary by distance, installation cost and extra cooking equipment for a new cookhouse. A new cookhouse for a larger camp, capacity of approximately 100, recently cost about $300,000.


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Another reason for moving away from land-based camps is that they represent a financial liability as sites must be turned to original condition under terms of provincial tenures. The cost can total an estimated $100,000 for removing structures and sewage systems and rehabilitating the camp footprint.

Water-based camp – Float camps have become a preferred option because they are mobile, being easily barged to a new logging area, and there are fewer forest workers required for the smaller cut areas. New float camps are stick-built on large steel barges. An estimated cost for a complete barge camp that can accommodate 50 persons is approximately $1.2 million, including the steel hull, which will cost approximately $200,000.

### 4.3 Operating Cost

Small and medium scale logging operations will pay a daily fee of $75-85 to owners of logging camps for accommodation and meals to house their forest workers while on a SBFEP job. Several forest companies were contacted for this profile and the operating cost of a camp was estimated as $65-85 per person per day. Under the IWA contract, IWA members pay a nominal room and board fee of $2.50 per day to the forest company operating the camp.

## 5.0 KEY INFRASTRUCTURE REQUIREMENTS

### 5.1 Transportation

Logging camps are part of the overall infrastructure for timber harvesting operations and are not stand alone economic entities. Transportation services are the main piece of harvesting infrastructure that links directly to logging camps. The BC Ministry of Forests Coast Appraisal Manual categorizes logging camps as either "Accessible" or "Remote" according to the mode of access for logging crews to the highway system. The former is defined as one where the marshalling area is connected by a road suitable for crew buses to a community having retail food and gasoline services. An isolated camp is one that is not "accessible" and includes camps where a portion of the access is by air or water only and not serviced by public ferries.

Forest companies using camps in remote locations, not serviced by roads are dependent on scheduled and charter float plane and crew boat services to move in a new crew and remove a crew finishing a shift. In several instances, they rely on a charter helicopter service to ferry forest workers from the camp to harvest areas on a daily basis; an example is Husby Forest Products Eden Lake camp on Graham Island. If water transportation is required for the daily commute to the work site, then a harvesting company will usually have its own crew boat.

The coastal water highway is characterized by scheduled and charter cargo delivery services via cargo / passenger vessels and towed barges and booms. Water transport is generally provided to logging contractors and licencees by dedicated towing and/or barging companies, many of whom transport logs from booming grounds. Production from dry land sorts is boomed and towed or barged by log sort, while unsorted production is barged or towed to central sorting facilities close to a variety of manufacturing customers. Barging is a necessary phase for timber sales in the Queen Charlottes and the west coast of Vancouver Island.


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Towing of bundle booms is common on the mid and south coast as well as from the east coast of Vancouver Island.

The expansion of the provincial highway system and the equally impressive network of forestry mainline roads is a primary cause for the elimination of logging settlements and reliance on short distance commuting to work sites and long distance commuting to short stay logging camps by forest workers.

# 6.0 LABOUR

## 6.1 Employment

Access to labour is not an issue for camps because of their low labour needs and skill requirements.

Camp employment depends on the number of forest workers in residence. On-site staff numbers are small for camp operations, approximately one staff person for every 15-20 camp residents is needed. A smaller camp of 30 persons would use a cook and a bullcook, who mainly handles clean-up duties. The camp staff would undertake light housekeeping chores, such as cleaning of common areas and changing bed linen once per week. Camp residents are expected to maintain the cleanliness of their own rooms. A mid–size and larger camp, in addition to the cookhouse staff, may employ a night watchperson who also has some light maintenance duties.

## 6.2 Skill Requirements

There are no specific educational or trade qualifications for camp staff but the cook's culinary skills are important in maintaining good morale in the isolated camp environment.

## 6.3 Seasonality

Camp staff works the same shifts as camp forest workers. Vancouver Island camps have a longer season of March through December than other parts of coastal BC where the season usually runs from March through late October. A watchperson is not usually used in the off-season.

## 6.4 Wage Rates

All major licencees and most major contractors have IWA unionized work forces. An IWA certified company will often hire camp employees who will earn hourly wages based on union-industry contract rates. IWA member camp staff are paid about the same as the lowest paid forest workers. Current contract rates are as follows:

- Head Cook (small crew, i.e. less than 18) - $24.71 + benefits
- Head Cook (large or medium crew) - $23.24 + benefits
- Baker / Second Cook - $23.49 + benefits
- Bull Cook (relief cook) - $22.19 + benefits


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- Lunchman - $23.37 + benefits
- Waiter / dishwasher - $22.19

The two largest camp catering operations pay according to either IWA or Local 40 wage scales. IWA certified forest companies that deliver their own camp food and housekeeping services pay camp employees according to IWA scale. Licencees and contractors can use contractors and do use small catering firms that are paid on a per camp resident per day basis for food purchase and preparation and light housekeeping services.

## 7.0 MARKET

Demand for logging camp services are a derived demand, tied to the demand for coastal BC forest products and their end use markets. The economic problems of the coastal forest industry are reflected in closure of several camps and downsizing of others.

Comprehensive information on the number, location and characteristics of coastal BC logging camps is not available. Land and Water BC has a database with tenure information but logging camps are not identified as a distinct use in its database so it is apparently impossible to obtain a list of its tenures that apply to logging camps. BC Ministry of Forests has the FTAS database in each district office and at Victoria headquarters with information on logging camps tenured through Special Use Permits.

There is a not a separate accommodation business for forest workers that has developed around logging camps. As a general rule forest companies have chosen to develop their own camps and institutional catering companies have stayed away from building contract camps or offering turnkey camp operations for coastal BC logging operations[10]. Forest companies believe that they control their camp operation costs better by retaining ownership and maintaining hands on control of most camp services.

## 8.0 GOVERNMENT REVENUES

### 8.1 Provincial

- Annual payments on leases, licenses of occupation and Special Use Permits. The amount paid is based on a percentage of appraised value. The set percentage rates are as follows: upland or foreshore lease is 8%, upland or foreshore license of occupation – 7.5% and special use permit - %.
- Other key sources of revenue include: tax on employee earnings; sales tax on business inputs; and, tax on business profits of suppliers.
- Employee Income Tax: Based on the average pre-tax earnings level for contract harvesters ($45,000)[11] a total of 8.3% is collected in provincial personal income taxes.
- Corporate Income Tax: 13.5% of taxable corporate income.


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- PST on purchases: The provincial sales tax is 7.5%, and would be charged on purchases made by the contractors. No PST is charged on purchases of timber.

### 8.2 Federal

- Employee Income Tax: Federal personal income tax is typically 2/3 of the total personal income tax collected.
- Corporate Income Tax: 26.12 % of taxable corporate income.
- GST is 7.0% and is charged on all goods and services purchased by the contractors.

## 9.0 ECONOMIC IMPACT ESTIMATE

### 9.1 Cost Driver, Not Revenue Generator

In coastal BC, logging camps are an important portion of the overall cost of timber harvesting but they are not economic drivers in and of themselves, as are wilderness tourism camps, lodges and resorts.

The portion of harvesting cost attributable to logging camps is dependent on assumptions about the remoteness of the camp, the type of harvesting undertaken at the camp's logging sites, helicopter logging being 3.5x more expensive than cable yarding, for example, and the distance from harvesting area to log handling area. Using Coast Appraisal Manual information, a remote camp and assuming 10% of the harvest is undertaken with helicopter logging, then camp costs account for 23% of total stump to dump harvesting cost of $65 per $m^3$. Obviously lowering camp costs are an important component in improving the cost competitiveness of coastal BC timber harvesting companies.

### 9.2 Employment

The number of logging camps is not known so no estimate can be made of the direct employment that is tied into camps. The average camp requires 2 to 3 persons for the cookhouse / bunkhouse operation. Employment multipliers / ratios have not been created for logging camps. A proxy multiplier is the number of indirect and induced jobs springing from direct tourism jobs. Overall for BC, the tourism employment multiplier is relatively low, 1.21, and is especially low for coastal areas as demonstrated in the following examples[12]: Central Coast – 1.08; Queen Charlotte Islands – 1.15; Prince Rupert – 1.20; and Port Hardy – 1.12.

### 9.3 Economic Activity

Economic activity in terms of forest industry spending on logging camps can be "ballparked" by using Coast Appraisal Manual information and timber harvest volume data. The amount of timber harvesting that is tied into logging camps is not known. An indirect estimate could be made by assessing the percentage of forest workers in a timber harvesting unit that regularly use logging camps but this information is also not known for coastal BC.


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[1] Coastal BC is defined as the Vancouver Forest Region plus TFL 41 in the Kalum Forest District.

[2] Stirling, J. (1996) Logging and Sawmilling Journal.

[3] Enemark, G., E. Terry and G. Holman (July 2001) Socio-Economic and Environmental Assessment: Final Report: Central Land and Coastal Resource Management Plan. Government of BC.

[4] Camp operators usually carry property insurance but insurance companies rely on government inspectors who make few visits to camps because of inspection resource constraints.

[5] Although sub-unit costs were not reported in the 2002 Coast Appraisal Manual, they were reported for the three previous years.

[6] The figures appearing in the Coast Appraisal Manual are averaged results. There is wide variation in costs between logging camps based largely on transportation distance and accessibility. BC Ministry of Forests does not publish the range of reported results.

[7] The 2002 figures in the Coast Appraisal Manual are based on 2001 data. The same lag is applicable to other reported years.

[8] Total costs include the following items: cookhouse/bunkhouse costs – cookhouse/bunkhouse staff and supplies, contract services, depreciation, lease, and maintenance of cookhouse/bunkhouse facilities; general camp costs – general labour and supplies, contracted services, depreciation, lease and maintenance of camp facilities, all camp buildings other than cookhouse/bunkhouse, call camp infrastructures (light plant, fuel farm, utilities), and all costs of owning, leasing, operating, and maintaining the camp's land- and water-based vehicles; crew airfare – airfare where crews must be flown in/out of camp for shift rotation changes; and freight by air and water.

[9] Average of the reported yearly results and not the average of the total $m^3$ and total costs for the shown four years.

[10] Turnkey camp operations are offered to the oil and gas exploration industry by Alberta companies, such as Travers Food Services Ltd.

[11] Resource Systems Management International Inc. October 1998. CPI is used to scale from 1998 to 2001 value.

[12] BC Stats (May 1999) British Columbia Local Area dependencies and Impact Ratios – 1996. Government of BC.


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